

Definity-G(x) Demystified:
By Walt Medak

Q: Our company has been growing rather quickly, and we recently installed a T-1 to handle the additional call volume. Until then, we had been using a number of ground start trunks. The problem I am having is that we are getting lots of alarms on the T-1. We are never out of service for any length of time. Maybe a dropped call here or there, and some annoying static, but it's something that we need to get fixed. I've called the provider of the circuit several times, and they say it tests out fine. Short of starting to replace things, what can I do?

A: The first thing to do is identify the actual error condition that the Definity is reporting as an alarm. We did some testing in your system, and discovered your T-1 circuit was experiencing slips. This is indicated by a failure on test 144 when running the command "test board UUCSS", and substituting the slot location of your DS1 board for the "UUCSS".

Slipping is a condition that is caused when the two endpoints on the circuit are not running at precisely the same clock rate. When your Definity was using the copper trunks, timing was not a major concern since the trunks were analog. The Definity will operate quite nicely getting its timing source from its own Tone Clock board. Once you switched to the T-1, which is a digital circuit, timing became extremely important. Even a very small difference between the timing derived from the Tone Clock board and that of the T-1 circuit itself will cause the circuit to slip. We took a look at the Synchronization form that defines where the Definity derives its timing source. The command is "display synchronization", or "change synchronization". Your system was still set to derive its timing from the internal Tone Clock board. When a T-1 is installed in the system, it is necessary to change that form so the Definity derives its timing source from the T-1 circuit. That way, the Definity will always be running at exactly the same clock rate as the T-1 circuit provider. If you have multiple T-1 circuits, you can set one as your primary synchronization source, and another as a secondary source in case the first circuit fails. Historically, dedicated long distance circuits were chosen as the primary source, and local circuits were used as the secondary source.

We noticed that once we changed the Synchronization source on your system to look at the new T-1, the slip errors stopped occurring right away. You can keep an eye on the status of any errors on your circuit a couple different ways. The one that I tend to use most often is the command "list measurements ds1 log UUCSS". This will give you a 24-hour history of the circuit broken down into 15-minute increments.

Q: I'm having some issues with coverage paths, and need some ideas of what I may be doing wrong. There are a couple people in our company that back each other up, so I am trying to set up their phones to cover to each other before going to voicemail. I am trying to get extension 2047 to cover to extension 2063 and then to voicemail. Likewise, I want extension 2063 to cover to extension 2047 before going to voicemail.

I'm very confused, because that scenario works for one of the phones, but not the other. If I call 2047, it will ring there 4 times, then cover to 2063 and ring a few more times

before going to voicemail. However, if I call 2063, it will ring there 4 times, and then go directly to voicemail.

A: There are a lot of things that affect how Call Coverage works. A coverage point won't be used if it is unavailable due to being busy, or having Send All Calls or Call Forwarding activated. The first thing I did when I looked at this issue was make sure extension 2047 was in an in-service/on-hook state, and neither Call Forwarding or Send All Calls was active. This information is all on one screen if you use the command "status station xxxx". Once I was sure that wasn't the issue, I looked at the coverage paths for the two phones. They were the same except for the extension numbers of the first coverage points. I looked at the programming for station 2063. It looked like a pretty basic digital phone configuration. Then I looked at station 2047, and found one major difference. There were bridged appearances of extension 2063. Bridged appearances are another thing that affects Call Coverage. I went back and looked at the coverage paths again. The field "Terminate to Coverage Pts. with Bridged Appearances?" was set to "no". This means that the coverage path for extension 2063 will ignore station 2047 and go to the next coverage point, which in this case is voicemail. There are two options for fixing the problem. You could either change the Coverage Path form so it will terminate to coverage points with bridged appearances, or you could remove the bridged appearance buttons from station 2047.